ABSTRACT:

The present invention is a system and method for increasing the value of the audio-visual entertainment systems, such as karaoke, by simulating a virtual stage environment and enhancing the user's facial image in a continuous video input, automatically, dynamically and in real-time. The present invention is named Enhanced Virtual Karaoke (EVIKA). The EVIKA system consists of two major modules, the facial image enhancement module and the virtual stage simulation module. The facial image enhancement module augments the user's image using the embedded Facial Enhancement Technology (F.E.T.) in real-time. The virtual stage simulation module constructs a virtual stage in the display by augmenting the environmental image. The EVIKA puts the user's enhanced body image into the dynamic background, which changes according to the user's arbitrary motion. During the entire process, the user can interact with the system and select and interact with the virtual objects on the screen. The capability of real-time execution of the EVIKA system even with complex backgrounds enables the user to experience a whole new live virtual entertainment environment experience, which was not possible before.